castor oil daily. Treatment is otherwise symptomatic. Psychotherapy is utilized if considered advisable. If the patient improves sufficiently, shock therapy is not recommended until improvement ceases, as a small number of patients will recover under this régime.

If the course of the illness is not satisfactory, shock therapy is then instituted. Insulin shock is strongly advised in the cases with a dementia praecox type of reaction. This is in accord with its use in dementia praecox generally. Electroshock has entirely replaced metrazol in convulsive shock therapy, because of ease of administration and relative freedom from complications, and is the treatment of choice in the manic-depressive type of reaction especially the depressed phase. While the use of convulsive therapy does not change the recovery rate to any marked degree in the postpartum depressions, it does substantially reduce the period of hospitalization, and probably increases the rate of recovery. Convulsive therapy is also used, in the few patients who do not show a complete recovery with insulin shock, often with excellent results. Electroshock therapy is considered preferable to symptomatic treatment in those cases of schizophrenic reactions where insulin shock cannot be utilized for various reasons. Progesterone should be tried in all cases in which the menstrual period is preceded by emotional instability and tension states. The advent of shock therapy has completely changed the prognosis in puerperal psychoses.

CONCLUSIONS

1. The mental illnesses which follow pregnancy constitute an indication for shock therapy. They primarily depend upon the constitutional makeup of the individual, though the precipitating factors as yet are unknown.

2. Unless properly treated early in their development, the prognosis in the so-called puerperal psychosis is poor.

3. Insulin shock is preferable in the dementia praecox type of reaction, but should be followed by electroshock if recovery is incomplete.

4. Electroshock is the treatment of choice in cases showing chiefly depression.

5. Progesterone may be of benefit in those cases with premenstrual tension.

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DERMATOLOGIC MANAGEMENT: SOME FUNCTIONAL CONCEPTS*

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WHEN one becomes chairman of a section, he is expected to give an address on whatever theme he wishes. He is given a free hand and discussion is barred. He may, therefore, say what he pleases and remain unquestioned. I have acquiesced in this prerogative and hope that the conception of this paper will be accepted as sound and thought-provoking.

By a functional concept in dermatological management, I mean that I am turning my thoughts to the functional disturbances that underly many of the phenomena of skin changes. This is not so much directed toward the experienced dermatologist, but to the tyro who has learned a formula by which to treat a diagnosis. This person must broaden his conception of management to include such factors as the individual as a whole, his color, age, and skin type, his physiology in general; the physiology of the part involved, and finally the physiology of the disease process itself. It would be far better if we could scrap all "name diagnoses," and adopt pathological ones. If the intricacies of the phenomena could be so condensed, our students then would not think in terms of a name, but in terms of physiological and anatomical changes.

Unfortunately, the discoveries of specific microbic agencies and specific deficiencies have had a limiting effect on the practice of medicine and its teachers. These have, in their acceptance, caused a neglect of associated causal factors without which no disease could exist. Medicine has been led into a search for new diagnostic procedures, and those, such as chemistry, bacteriology, radiology and endoscopy, have been so applied. The search for accuracy has over-reached symptomatology; objectivity has become paramount. We are now turning away from the focus of infection or focus of irritation to one of consideration of age, sex, heredity, physical type, and temperament, as well as emotional and occupational stress. With these, we must combine eating habits, relative to food and its mineral and vitamin factors; and consider the individual's ability to absorb and utilize these factors in a normal and effective manner.

It is necessary, therefore, that we get away from nomenclature and classification as the main objective of diagnosis. All symptoms are specific phenomena for a physiological process or disturbance referable to a variety of changes or stresses.

DIAGNOSTIC AIMS

The first aim of diagnosis should be to discover the physiology of a symptom or functional error,

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and only then to determine whether it is due to emotion or fatigue, constitutional change of body-chemistry, or a variable of the utilization of the food and vitamin factors. These changes may be disclosed by wheal formation, infiltration, eruption, ulceration, and all the other manifestations of disturbance of the nutritional and normal life process of the cell.

The field opens to an immensity that cannot be touched in one short paper or by one man's restricted knowledge of many phases of the physiology and chemistry of the human organism. I have selected only a few instances out of my experiences.

We can start with an axiom, "The normal body is a healthy body; therefore, the normal part is a healthy part." With this in mind when in the presence of a skin condition not explainable by the external attack of agencies that would injure any skin to a like degree, we must ask ourselves, "Why does this individual react differently than those around him? What functional change is present that makes him react with a lowered threshold and in an abnormal way?"

CASE EXAMPLES

I will give you the example of disseminated neurodermite (Vidal). These cases have a skin that reacts in a characteristic way on any part of their skins if frictional trauma is there applied. Their complaint includes one of general skin irritability, coupled with an over active nervous habitus. A careful survey of their living habits will often bring out defective mineral nutrition and psychic conflicts. If we occlude a single lesion from injury for a sufficient time, it recovers. We then may call it a "contact dermatitis." It is true that it responds to contact, but the skin has an inherent irritability that a normal skin does not have. We can then conclude that there is a disturbance of the function of this skin that permits an abnormal reaction to physical damage. If we subscribe to the nervous origin of this condition, we are no better off. We had better ask, "Why is this patient nervous?" "What constitutes nervous tension?" "Why do we have the neurotic?" The psychiatrist may answer the above to his own satisfaction, but is he entirely right or has he, too, neglected the chemistry and physiology of the organism that must be maintained in balance? "*Mens sana in corpore sano*" can become more than a schoolboy phrase if we apply it to medical practice. A careful dietetic survey will commonly show these patients to be restaurant diners or lunchpail eaters: if they are women they don't drink milk, and if they are men they consume substantial meat and potato meals without salads, fresh vegetables, fruit or other refinements. Neither sex eats much fresh fruit. Neither one has a proper mineral or vitamin intake.

These cases must be restored to a normal balance in eating, mineral intake must be increased, and the necessary vitamin content supplied for their utilization, if we are to get more than the symptomatic relief provided by ointments, x-ray and protective dressings. I have found it good practice to provide an added calcium and Vitamin D ration at the start of treatment.

* * *

Another good example of functional upset that illustrates my point is that of the patient with varicose veins, ulcer, varicose dermatitis, and a light sensitive dermatitis of the arms and face. We can break this case down to the first nutritional damage in the leg area. This is the start of a vicious cycle that has been seen countless times. This follows the steps of slowing of the blood stream due to venous damage, with dilitation of the veins and incompetancy of the valves. With slower flow, the nutrition of the vessel suffers and further damage is added, again causing further dilatation and further slowing. The column of venous blood becomes heavy, and capillary flow becomes almost stopped. A portion only of the murky contents of the vessel gets back to the heart, the rest recirculates in the leg. The catabolic products accumulate, cellular disintegration occurs, platelets adhere to the damaged intima and dissolve, releasing a histamine-like substance. Serum proteins and globulins accumulate and become modified. Cellular infiltration and sclerosis of tissue occur, and further nutritional damage results. The overlying skin erupts or becomes necrotic, eczema and ulcer appear. As histamine-like substances spread through the circulation, the individual becomes photosensitive. These are the cases that storm our offices after the first sunny days in spring with the fiery red arms and faces. They are like photographic plates awaiting the opening of the shutter.

At the same time as the above is taking place, a psoriatic individual develops his most resistant lesions over the bad leg areas, and if he has lichen planus, the lesions overlie the dilated blood vessels and ulcer sites. If lichen simplex chronicus occurs, it is likely to choose the leg with the nutritional damage.

In these cases, large doses of vitamin C, support of the circulation by firm bandaging and the injection of chemicals to increase the oxygen-carrying power of the blood (Tetrathione), have given the only lasting good results. These results are obtained not by medicines or ointments, but simply by the reversal of the breakdown cycle.

KELOID

I would like to discuss another condition that develops apparently on a functional basis, and that is keloid.

I have seen keloids develop under a variety of circumstances.

REPORT OF CASES

CASE 1.—The most discouraging that I remember was the case of a child burned with hot coffee. A first and second degree damage only, over the chest and left arm. Healing was complete and perfect in about one week, hardly a trace of scar being present; but two weeks

later a rapid and dramatic keloidal development occurred, disfiguring the child's body very badly. I now ask why, after perfect healing did a delayed keloid occur? This indicates with certainty a dormant functional change that reactivated fibroblastic growth after a latent period in which healing was apparently complete.

CASE 2.—A second instructive case was that of a young girl who spilled boiling candy over the entire back of her fingers and hand. I saw her only after the lesion had healed with an unsightly and rigid keloid. I started her on x-ray treatment. She improved slowly but considerably, and was about through treatment six months later. Three months after practical dismissal, she returned with new keloids under her fingernails, and the nails were split by the growth beneath them. She gave the history that she had taken up piano playing before the changes began. I did not want to give her further x-ray, and instead stopped her playing and bandaged the tips of each finger with elastoplast (Duke Lab.), and kept them so covered for eight weeks. By this time the keloids had gone and the hand was back to normal.

CASE 3.—A third case was that of a child that developed a palmar keloid from falling and burning the hand on a stove. This keloid had distorted the hand into a tetany form and had persisted for a year. The keloid was webbed in type binding the thumb toward the palm and cupping the hand. I applied no x-ray, but instead wrapped the hand in elastoplast to immobilize it and remove all tension. In two months the keloid had absorbed and function was restored. This keloid may have regressed spontaneously, but I don't think so, since it had remained unchanged for over one year.

COMMENT

These cases show that keloid is a latent property of skin healing. In the first case, no traumatic factor seemed to operate. It was apparently a physiological one. I feel from this case that keloids should be preventable, and are probably due to a mineral or hormone imbalance not yet explainable by our present knowledge. The other two cases show the rôle of, 1. Trauma and, 2. Tension. When both were relieved, healing took place. It was therefore a reversable process without the added rôle of x-ray. Spontaneous regression also does occur without relieving tension or removing trauma. These cases are the reverse of the first type.

OTHER CONDITIONS

Alopecia areata has also seemed a condition in which functional management applies. The hair is supposed to fall following nerve trauma that produces persistent vasoconstriction of the capillary plexis at the base of the papillae. The area becomes smooth and the appendages undergo atrophy. If a case is recovering spontaneously, the skin resumes a reasonable appearance of normality, the follicles become noticeable structures and hair begins to grow. Methods of stimulation have failed to produce much response if on the order of applications of phenol, cresol, or ultra-violet light. If growth is started, it is likely to be colorless. If we proceed somewhat differently, and freeze the area for 5-10 seconds with firm pressure with carbon dioxide snow, we get brisk stimulation; but in addition, produce a paralysis of the vaso-constrictor nerve fibres, so that dilatation and erythema are prolonged. The hair growth is accelerated over the other methods, and the hair retains natural pigment from the start. If we give calcium and vitamin D without freezing, the white phase is also absent, probably due to the known sedative and relaxing action of the calcium on the nerve endings. The cases that do not respond to this method of attack are few.

The effect of vitamin D treatment in *sclerodermia and roentgen sclerosis* was reported by me in the Archives of Dermatology and Syphilology, in May, 1940 (Vol. 41, No. 5, pg. 842). Since that time, a larger series of cases have accumulated, and continued to give favorable responses. I believe that the application of this form of therapy is particularly beneficial, and therefore a "must" in treatment of roentgen sclerosis. I further suspect that it may be used prophylactically. If telangiectasia of roentgen damage results from the sclerosis, this may also be prevented. I do not think it will help after the vascular dilatation has taken place. The softening of the areas has been definite and positive.

The theoretical basis of this response is the same as in sclerodermia. Calcium is increased in the areas, and therapy that modifies this factor is one to aid.

Low calcium diets would seem to be indicated, and I have used them in some cases and not in others. Perhaps we should consider the premise that the calcium is remetabolized rather than excreted. Keloids likewise contain considerable calcium, and may contain grains of calcareous material. I have given burn cases calciferol routinely. I am not satisfied that there has been any effect.

Therapy of *acne* has been little changed in basic principals. I do not consider x-ray to be the therapy of choice. My management for the last 18 months has been satisfactory in the use of combined vitamin A and calciferol, with intramuscular calcium gluconate (10 c.c. of 10 per cent intragluteally 2 times a week) to control periodic flares of the process or to get quicker control of a bad case. I use x-ray reluctantly, and only as a rare aid in the above management. I have not given "courses" of x-ray treatment since 1933. It should be added that care and patience in such cases is a prime requisite.

OTHER FORMS OF VITAMIN THERAPY

To consider all other forms of vitamin therapy would involve the writing of a book. I use vitamin B as a complex, and add the fraction I wish to emphasize. I have recently been puzzled by the failure to get a complete response in an old lady with ariboflavinosis, until I learned that riboflavin is rapidly destroyed in the absence of hydrochloric acid. These, therefore, must be given as a combination in an achlorhydric individuals. I use vitamin A alone in the defects of keratinization, and have seen benefit in hyperkeratoses of the

palms and soles. Some effect results from the use of vitamin A in icthyosis; it is not complete, but the skin withstands the usual traumata to a more normal degree, and patients speak of more comfort. I likewise give it combined with vitamin C and D in the case of senile eczema.

Vitamin D (Calciferol) has given some beautiful results in psoriasis and in other cases only a very slow change, if any. I use it, and keep patients on it for a year. I don't give extreme doses, 50,000 units daily seems to be satisfactory.

You will realize that this has been an abstract consideration of procedures that are not universally accepted and used, but have led to a degree of success in management that I believe to be superior, and more on a functional basis than many that are in general use today. Each incident perhaps should be the reason for a fuller investigation than is presented here.

The purpose of this presentation is to indicate a few pathways away from textbook formulas, and from x-ray therapy. It is also to suggest that some of our homely ruts should be abandoned.

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CALIFORNIA PHYSICIANS' SERVICE*

CURRENT ACTIVITIES

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GREAT movements at their start often are not recognized for their true value or on the correct basis.

The human mind, however, senses long before actual performance, these trends toward great needs of society. Each one of you can enumerate such great movements through history. For me today to name these would be a surfeit of words and would not be of any value save to liken the subject, of which I speak, to a movement of great worth. I speak of California Physicians' Service. To me, this endeavor is not a small project of experiment, but it is an expression of part of a great human movement which will raise the quality of human relationship, both physical and mental.

BEGINNINGS OF STATE-WIDE MEDICAL SERVICE IN CALIFORNIA

Most of you remember the seeds of this growth, though sometimes that remembrance is dulled by irritating details of present performance. First, at the Riverside meeting of this House of Delegates you remember the great surge of incentive and oratory that enveloped our profession. Then came the special meeting of the House of Delegates in Los Angeles, which dealt with a grand survey. Thereafter, came conflicts with advertising clinics which had, what many considered mistaken, ideas of how to accomplish prepayment medical service. Then came the compulsory proposals by the legislature and misguided political interests. Then through it all we see the efforts of hospital and medical men, directed toward the welding of professional needs with practical necessities and the proposal of our C.P.S. We may be proud that in all the United States, California men first had the temerity to attack, on a State-wide basis, this problem of great difficulty and technical distress. The fact that they held uppermost at all times the real issue involved (i.e., the greatest benefit to the poor, sick patients) is probably best proved by the fact that such mistakes as were made, were made by the attempt to provide the whole answer at the start, rather than to add step by step till the ladder reached the desired level.

Public ability to grasp sudden changes is far below the vision of great leaders.

I was interested recently in discussing this subject with an Eastern man who is associated with a highly successful hospital and medical plan. I asked him to tell me what eventually they hoped to do. "We have somewhat the following plan. First, get great numbers of members in the hospital association. Then in conjunction with the medical profession offer surgical care when *in* the hospital. Then add such medical care as needed for cases *hospitalized,* such as pneumonia, cardiac decompensation and such serious diseases. Then add in succession these services to dependents of the employed man. Such plans will be eminently successful and will solve most of the needs ascribed to failure of an individual to cope with catastrophic illness." He went on to say that the additional growths and steps of this plan came as the members realized the great value of the services and were the result not of a change of need but rather an awakened mass intelligence.

I remarked that he apparently hoped that they could some day offer to a needy public the very thing that C.P.S. was already offering.

WHY PROGRESS WAS SLOW

The fault with our plan,—and fault there was,—lay in entire inability of public psychology to accept and support the program. I include in this failure both the doctors and the public.

Time has tempered good plans with a knowledge of the need to lead slowly and the trustees of C.P.S. have made changes which will lead to success. The promise of C.P.S. has been all in all up to recent date, but now we are beginning to see the *fulfilment* of what we may expect. Now let me give you a few of the facts. When C.P.S. started, the full-coverage plan for the employed person was put in effect. We, as doctors, expected the type of use of the plan would be the same as the type of service offered. We found in the transition from a fee basis of service to a prepaid type, that people were moved to the extremes of use. The success of that plan was doomed, because 15-20 per cent of the beneficiaries demanded

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